Washington State's Forest Practices Program and the Clean Water Act

Washington State Department of Ecology and
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In the 1999 Forests and Fish Report, Washington forest landowners and federal, state, local, and tribal governments agreed on a new set of aquatic resource protection commitments governing forest practices on state and private forest lands. The U.S. Environmental Protection Agency (EPA) and Ecology believe that as a result of these commitments, waters covered by the report will meet water quality standards in the future. This paper describes Clean Water Act assurances that EPA and Ecology identified in response to implementation of the Forests and Fish Report. The paper also outlines what information is needed to continue these assurances beyond 2009.

Background

The Clean Water Act is the cornerstone of surface water quality protection in the United States. The objective of the statute is to restore and maintain the chemical, physical, and biological integrity of the nation's waters, and it includes a national goal to attain water quality "which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." 33 USC § 1251(a).

The U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology) and tribes with EPA-approved water quality standards are co-stewards of the Clean Water Act in Washington State. EPA and Ecology anticipate that implementation of the Forests and Fish Report and associated statutes and rules will achieve steady progress in improving water quality in the short term and help water bodies under state jurisdiction meet water quality standards in the longer term.

One of the purposes of the Forest Practices Act is to "achieve compliance with all applicable requirements of federal and state law with respect to nonpoint sources of water pollution from forest practices" (RCW 76.09.010(2)(g)). The legislature intended that the Forest Practices Act and rules would fully satisfy the requirements of the Clean Water Act with respect to nonpoint sources of pollution attributable to forest practices (RCW 77.85.180(2)).

Clean Water Act Assurances

EPA and Ecology have identified the following Clean Water Act assurances, which are paraphrased from Schedule M-2 of the 1999 Washington Forests and Fish Report. The current status is listed below each assurance:

- Total Maximum Daily Loads (TMDLs) for waters impaired due to forest practices subject to forest practices rules, are a lower priority for EPA and Ecology. Therefore, these TMDLs need not be prepared prior to July 1, 2009.

  On June 2, 2005, Ecology submitted a 303(d) list of impaired waters to EPA for formal review and approval. The submittal included a section justifying a lower priority for TMDLs on state and private forestlands prior to July 2009.

- EPA and Ecology will not ask the Forest Practices Board to adopt any new forest practices rules to address Clean Water Act (CWA) requirements prior to 2009, unless those new rules are recommended through the agreed upon adaptive management process (RCW 76.09.370(6) and (7) and WAC 222-12-045) or are made necessary by changes to the CWA or CWA implementing regulations.

  In 2003, the State adopted new water quality standards (Chapter 173-201A WAC), including stricter temperature criteria for some waters and stricter antidegradation provisions than in previous standards. If necessary to meet the new standards, Ecology will ask the Forest Practices Board for changes to forest practices rules or guidance, through the adaptive management process.

- If a TMDL is produced in a forested or a mixed-use watershed, achievement will be through implementation of the Forest Practices Program. After 2009, if the TMDL load allocations cannot be met through the forest practices rules, the adjustment of those management practices will be through the adaptive management process. Assurances for forest landowners in mixed-use and single use watersheds will be the same, and subject to the same conditions.

  The Forest Practices Program has been the implementation mechanism for achieving load allocations in state and private forestlands since 2001. For example, the Forest Practices Act or Forests and Fish Report are referenced as an implementation mechanism in the Upper Chehalis River Basin Temperature TMDL, the Willapa River Watershed Temperature TMDL and the South Prairie Creek Temperature TMDL.

Schedule M-2 identified three contingencies for Clean Water Act assurances, which have been or are currently being met:

1. A final Forests and Fish Report is produced.

   The official Forests and Fish Report was produced on April 29, 1999.

2. State legislation implementing the Forests and Fish Report is passed, emergency or final forest practices rules are adopted by the Forest Practices Board, and sufficient funds are appropriated to fully implement the Report.

   The Salmon Recovery Act (ESHB 2091), adopting the Forests and Fish Report, was signed by Governor Locke in 1999. Forest practices rules implementing the report were adopted in 2001. State and federal governments have appropriated funds to implement the Forest Practices Program.

3. Landowners will share water quality data collected in cooperative research, adaptive management, and TMDL development. Landowners are further encouraged to share all pertinent water quality data to assist in water quality planning efforts.

   Landowners participating in Forests and Fish adaptive management studies have been sharing data collected for those studies. In addition, some landowners have shared data they collected in watersheds where TMDL studies have been conducted.

Continuing Obligations under the Clean Water Act

Ecology and EPA have ongoing obligations related to the Clean Water Act and the Forest Practices Program.

- Under a 1997 memorandum of agreement with EPA, Ecology agreed to develop TMDLs (water cleanup plans) as required for waterbodies on the 1996 303(d) list of impaired waters by 2013. The timeline was the result of a settlement agreement between EPA and a consortium of environmental groups in response to a lawsuit.

- Between now and 2009, Ecology will continue to develop TMDLs for waterbodies affected by causes other than forestry and for those affected by mixed land uses, including forestry. TMDL implementation for lands subject to the Forest Practices Act will be through implementation of the Forest Practices Program.

- Landowners, including those with individual Habitat Conservation Plans, may request a TMDL prior to 2009, and are encouraged to do so. Forest landowners are also encouraged to participate in broader cooperative watershed planning and restoration efforts to improve water quality.

- Ecology and EPA will continue to review water quality standards to ensure protection of beneficial uses of state waters. Water quality standards include antidegradation of existing water quality. Ecology and EPA will also review adaptive management study results to determine if the Forest Practices Program meets antidegradation requirements.

- Ecology will continue its roles of reviewing and concurring on rule changes with the Forest Practices Board, assuring compliance with forest practices regulations along with DNR, monitoring compliance with water quality standards, pursuing necessary changes through adaptive management, and participating in water quality research related to forest practices. As part of its review of rule changes pertaining to water quality protection, Ecology will analyze the rule's effect on antidegradation.

- Ecology and EPA will continue to assess water quality of state waters and add or subtract water body segments in the Water Quality Assessment, including the 303(d) list of impaired water bodies in accordance with an approved listing policy.

- Ecology will continue to identify the Forest Practices Program as the implementation mechanism for compliance with the Clean Water Act on state and private forestlands in the following documents:

  - The Washington State Water Quality Management Plan to Control Nonpoint Source Pollution.
  - The Washington State Water Quality Assessment Section 305(b) Report.
  - Other reports and agreements with EPA addressing pollution from activities covered by the Forest Practices Act.

- Ecology and EPA will work with the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration Fisheries Service to coordinate Forest Practices Program progress reviews at approximately five-year intervals.

- EPA will participate in periodic Forest Practices Program progress reviews to ensure that the Clean Water Act assurances remain appropriate. EPA will invite affected Tribes to participate in these progress reviews.

Conditions Affecting Clean Water Act Assurances

EPA and Ecology would need to consider modification or withdrawal of Clean Water Act assurances under any of the following circumstances:

<u>Statewide</u>

- Adoption of new water quality standards not anticipated in the Forests and Fish Report, if those new standards cannot be accommodated with adaptive management. The Report anticipated potentially lower temperature standards, and targeted numeric and narrative standards relevant to aquatic habitat, including antidegradation.

- Failure to implement the rules called for in the Forests and Fish Report for any reason, including:

    - Significant loss of funding or staffing to the state agencies dedicated to forest practices regulation or monitoring.
    - Lack of enforcement of forest practices on the part of state regulatory agencies.
    - Broad scale landowner non-compliance with the Forest Practices Act or rules.
    - Weakening of state enabling statutes or regulations affecting implementation of the Forests and Fish Report.

- Failure to upgrade regulations or guidance called for in adaptive management. This includes failure to develop agreed upon resource objectives, research priorities, and compliance monitoring programs.

- Court orders, changes to the CWA, or state or federal regulatory changes that cannot be otherwise addressed.

Individual landowner

An individual landowner who is not in compliance with forest practices rules pertaining to water quality protection is also not in compliance with the federal Clean Water Act or state Water Pollution Control Act. The state will take an appropriate level of enforcement to achieve compliance. If the non-compliance is contributing to a water quality impairment, Ecology or EPA may consider other options under state and federal law, including the requirement for a TMDL.

2009 Review

Ecology and EPA are responsible for determining, by 2009, if waters of the state will be on a positive trend toward meeting state water quality standards as a result of Forest Practices Program implementation. If not, Total Maximum Daily Loads (TMDLs) may need to be developed to identify if any further implementation requirements are necessary under the Clean Water Act, for waters impaired by sediment, turbidity or temperature in the forest environment.

One of the purposes of this paper is to describe the information needed by Ecology and EPA to determine if implementation of the Forest Practices Program is leading to attainment of water quality standards for waters of the state, based on credible science. Ecology and EPA will use this information to make a TMDL determination by 2009[1].

[1] Determinations on whether TMDLs are required are made as part of 303(d) listing decisions. EPA will rely on Clean Water Act regulations and the most current EPA guidance regarding 303(d) listings when making decisions on Ecology's 303(d) listing/delisting submittals.

The forest practices rules and other commitments from the Forest and Fish Report form the basis for attaining water quality standards on lands subject to the Forest Practices Act. In 2009, Ecology and EPA will review the Forest Practices Program to determine if:

- The forest practices rules, guidance and outreach commitments related to water quality have been implemented.
- Compliance monitoring shows consistent application of the rules.
- The assumptions for the prescriptions that form the basis of the protection measures have been validated.
- Effectiveness monitoring shows that waters of the state are on a trajectory to achieve water quality standards; and finally.
- The Adaptive Management Program is effective in assisting the Forest Practices Board in determining when it is necessary to adjust the Forest Practices Program for aquatic resources to meet Clean Water Act goals.

Below we describe the information needed, identify projects in the current CMER Work Plan that will or could meet some of these needs, and identify specific information gaps that will need to be filled in order to make a TMDL determination in 2009. Ecology and EPA's intent is to maximize the clarity, predictability and defensibility of all Clean Water Act decisions related to the Forest Practices Program, hence the need for this document.

Ecology and EPA are focusing attention on two parameters, water temperature and sediment, in determining whether Forest Practices Program implementation will allow state waters affected by forest practices to meet state water quality standards. These two parameters are presumed to be the most sensitive indicators of the net effect of forest practices on aquatic ecosystems and water quality.

Information Needed for 2009 Review

The following is a list of information needs that will allow Ecology and EPA to determine in 2009 if implementation of the Forest Practices Program will adequately address 303(d) listed water bodies subject to forest practices rules.

Guidance, Training and Outreach Commitments

The Forest Practices Program includes both regulatory and voluntary commitments to help ensure consistent implementation of the Forest Practices Act and rules. Ecology and EPA will work with other adaptive management participants to determine which commitments still need to be completed or continued to protect water quality. Examples of these commitments might include:

- Protocol for perennial stream identification.

- Implementation of Regional Unstable Landform Identification Project.

- Procedure manual with detailed guidance regarding contents and approval process for alternate plans.

- Training to identify potentially unstable slopes.

- Training programs for operators on road maintenance and construction standards;.

- Outreach to small forest landowners on protecting public resources.

Compliance monitoring and Program Evaluation

Information needed from compliance monitoring and program evaluation includes**:**

- Documentation based on compliance monitoring data that the forest practices rules are being implemented in a reasonably consistent manner across the state. The questions that need to be answered include:

    - What level of compliance is being achieved in each DNR region,.

    - When rules are different for small landowners than for large landowners, what level of compliance is being achieved by each landowner category.

    - How well rules regarding water quality protection measures such as riparian buffers; road construction, maintenance and abandonment; alternate plans; and unstable slope requirements are being implemented.

- Road Maintenance and Abandonment Plan (RMAP) results that are readily available, including: where RMAPs are complete, a summary of all active and orphan roads and abandoned roads.

- Results of an analysis of small forest landowner roads not yet covered by RMAPs or checklist RMAPs. The goal of the analysis is to estimate whether these roads potentially threaten water quality, so that strategies can be developed or modified to assure they are fixed by 2016.

- Results of an analysis of alternate plan compliance with standards in the rules that evaluates whether alternate plans provide protection to public resources at least equal in overall effectiveness as default forest practices prescriptions.

Adaptive Management Program

In general, EPA and Ecology are looking for an active, functional Adaptive Management Program. The following will help achieve this:

- An approved Adaptive Management Program section in the Forest Practices Board Manual that will provide formal procedures for participants to successfully link science questions to policy decisions.

- A CMER Work Plan that includes water quality-related projects that have been prioritized for funding and include program integration across spatial scales.

- Easy access to reports and data from the Adaptive Management Program on the Internet so the information can be used in existing public processes associated with the Clean Water Act.

Adaptive Management Monitoring Needs by 2009

Adaptive management is dependent on quality research projects that answer key questions. It requires cooperation from Forest Practices Program participants for designing appropriate studies, finding representative study sites, and conducting studies in a timely manner.

The projects that Ecology and EPA believe are necessary for evaluating the effectiveness of forest practices prescriptions for temperature and sediment are currently underway or are starting up. The results should tell us what the current condition is, whether current practices are effective at the site-scale and if current practices are likely to lead to waters meeting standards over time. Ecology and EPA have identified the following information needs for making the 2009 TMDL decision. Examples of projects that could fulfill these needs are provided, with the recognition that this is not an exhaustive list and that project scopes may change over time.

<u>Temperature</u>

- An estimate of the current status of stream temperature and riparian stand condition on forest lands subject to the Forest Practices Act across Washington State. For example, the Extensive Riparian Monitoring Phase I, as currently designed, will provide an estimate of the status of stream temperature and riparian buffer condition and will provide the baseline data for evaluating changes over time.

- An evaluation of the reach-scale effectiveness of riparian buffer prescriptions at providing adequate shading post-harvest to protect stream temperatures. For example, the Type N Buffer Characteristics, Integrity and Function Project; Type N Experimental Buffer Treatment, including competent and incompetent lithologies; Type 5 Experimental Buffer Treatment; and Eastside Riparian

Shade/Temperature Effectiveness Project all test some aspect of the effectiveness of riparian buffers in protecting water temperature.

- An evaluation of the cumulative effects of harvest on stream temperature. For example, active participation in the Intensively Monitored Watersheds project could provide the opportunity to evaluate effects at a watershed scale.

Sediment

- An evaluation of the effectiveness of the Forest Practices Program in reducing input of road sediment to streams. Road Sub-Basin Scale Effectiveness Monitoring, as currently planned, is an example of a study that could provide this information.

- An evaluation of the cumulative effects of forest practices on sediment input and effects on stream habitat. For example, active participation in the Intensively Monitored Watersheds project could provide the opportunity to evaluate sediment inputs and instream effects at a watershed scale.

- Identification of high landslide hazard areas. As planned, the Landslide Hazard Zonation map (currently under development) could provide this information.

Conclusion

Ecology and EPA recognize the considerable progress achieved since the Forests and Fish Report was developed. The needs in this paper are based on what we know now. As validation, compliance and effectiveness monitoring move forward, priorities may change. EPA and Ecology look forward to working closely with other Adaptive Management Program participants to ensure that the Forest Practices Program is successful over the long term, and meets the objectives of the Clean Water Act. We hope that this paper has helped answer questions regarding Clean Water Act assurances and will be considered in decisions regarding monitoring priorities.